

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



September 15, 2017

CA2017-758

Susan Lipper  
Director, State Government Affairs  
1755 Creekside Oaks Dr., Suite 190  
Sacramento, CA 95833-3662

**SUBJECT:** Audit of T-Mobile Bay Area Region

Dear Ms. Lipper:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Raymond Cho and Brandon Vazquez of my staff conducted a Communication Infrastructure Provider (CIP) audit of T-Mobile's Bay Area Region from July 10, 2017 to July 12, 2017. During the audit, ESRB staff conducted field inspections of the facilities and equipment and also reviewed pertinent documents and records.

During the audit, we identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please provide a written response within 30 days of your receipt of this letter indicating all corrective actions and preventive measures, taken or planned, to address the violations to ensure compliance with GO requirements. In addition, provide an updated pole loading calculation for BA52162A with the updated and correct attachment height. The response should indicate the date of each remedial action and preventive measure completed within 30 days. For any outstanding items not addressed within 30 days, please provide the projected completion dates of all actions for all violations outlined in Sections II & IV of the enclosed Audit Findings.

If you have any questions concerning this audit, please contact Raymond Cho at (415) 703-2236 or [raymond.cho@cpuc.ca.gov](mailto:raymond.cho@cpuc.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Banu Acimis".

Banu Acimis  
Program and Project Supervisor  
Electric Safety and Reliability Branch  
Safety and Enforcement Division  
California Public Utilities Commission

**Enclosures:** Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC  
Lee Palmer, Deputy Director, Office of Utility Safety, SED, CPUC  
Charlotte TerKeurst, Program Manager, ESRB, CPUC  
Raymond Cho, P.E., Senior Utilities Engineer, ESRB, CPUC  
Brandon Vazquez, Utilities Engineer, ESRB, CPUC

## AUDIT FINDINGS

### I. Records Review

During the audit, my staff reviewed T-Mobile's records for the period from December 21, 2015 through June 29, 2017. The following records were reviewed:

- T-Mobile's detailed inspection records, work orders, and maintenance records.
- T-Mobile's company procedures/guidelines.
- T-Mobile's staff training program.

### II. Records Violations

1. **GO 95, Rule 31.2A, Communication Lines**, refers to Rule 80.1.

**GO 95, Rule 80.1A(4), Record Keeping**, states in part:

*"Each company shall maintain records for at least ten (10) years that provide the following information for each facility subject to this rule: The location of the facility, the date of each inspection of the facility, the results of each inspection, the personnel who performed each inspection, the date and description of each corrective action, and the personnel who performed each correction action. Commission staff shall be permitted to inspect records consistent with Public Utilities Code Section 314 (a)."*

T-Mobile's inspection program does not include records that identify the personnel who performed each inspection.

2. **GO 128, Rule 17.2 - Inspection**, states:

*"Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements of these rules. (See Rule 12.3)"*

ESRB staff evaluated T-Mobile's inspection procedure and determined that the inspection procedure does not describe an underground facilities inspection process. ESRB also noted that T-Mobile inspectors do not open padmounted equipment during inspections; however, they do check for locks, damage, and graffiti. Therefore, ESRB determined that T-Mobile does not thoroughly inspect its underground facilities.

T-Mobile must review and update its inspection procedure by including inspection requirement and details for underground facilities and conduct thorough inspection of its underground facilities.

### III. Field Inspection

During the field inspection, my staff inspected the following facilities:

Site ID	Site Address	Facility Type	Padmounts and Underground Facilities
SF15063C	1005 Olmo Ct	Antennas	Pad Mount (Telco)
SF54255B	6017 Wellfleet Way	Antennas	None
SF24554D	5300 Graves Ave	Antennas	None
BA52162A	4885 Bucknall Rd	Antennas	Pad Mount (Across Street)
SF03140A	113 Middlefield Rd	Antennas	None
SF23254E	1801 18th Ave	Antennas	None
	1824 18th Ave	Pole	None
	1842 18th Ave	Pole	None
	1874 18th Ave	Pole	None
	1894 18th Ave	Pole	None
	1100 Ortega St	Pole	None
	1901 18th Ave	Pole	None
SF23253E	2601 46th Ave	Antennas	None
BA12843C	9033 Seneca St	Antennas	None
BA22521F	2037 Mastlands Dr	Antennas	None
BA12847A	5985 McAndrew Dr	Antennas	None
BA02099A	5635 Moraga Ave	Antennas	None
BA52168A	1215 Santa Fe Ave	Antennas	None
BA22904B	1330 Cedar St	Antennas	None
BA12563J	1560 Dwight Way	Antennas	None
BA41452B	3139 Gloria Terrace	Antennas	None
BA01366A	1605 Reliez Valley Rd	Antennas	Pad Mount (Telco)

Site ID	Site Address	Facility Type	Padmounts and Underground Facilities
BA01373A	1480 Pleasant Hill Rd	Antennas	None
BA01347A	3664 Happy Valley Rd	Antennas	None
BA01348A	868 Moraga Rd	Antennas	Pad Mount

#### IV. Field Inspection Violations

During the field inspection, my staff observed the following violations:

**1. GO 95, Rule 31.1, Design, Construction and Maintenance**, states in part:

*“Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.”*

T-Mobile power cabinets attached to the following poles were missing a lock:

- BA22521F
- BA12563J

**2. GO 95, Rule 42, Grades of Construction**, states in part:

*“Supply and communication lines, where involved in crossings, conflicts or on poles jointly used, shall be constructed and maintained so as to conform with grades of construction not less than as specified in Table 3.”*

**GO 95, Rule 44.1, Installation and Reconstruction**, states in part:

*“Lines and elements of lines, upon installation or reconstruction, shall provide as a minimum the safety factors specified in Table 4. The design shall consider all supply and communication facilities planned to occupy the structure. For purposes of this rule, the term “planned” applies to the facilities intended to occupy the structure that are actually known to the constructing company at the time of design.”*

T-Mobile used Grade C construction requirements when conducting pole loading calculations for pole SF24554D. Since this jointly used pole has electric distribution and communication circuits attached, T-Mobile must revise its pole loading calculations using Grade A construction requirements.

**3. GO 95, Rule 87.7D(1), Covered from Ground Level to 8 Feet above Ground,** states in part:

*“Risers shall be protected from the ground level to a level not less than 8 feet above the ground by:*

- (a) Securely or effectively grounded iron or steel pipe (or other covering at least of equal strength). When metallic sheathed cable rising from underground non-metallic conduit is protected by metallic pipe or moulding, such pipe or moulding shall be effectively grounded as specified in Rule 21.4-A , or*
- (b) Non-metallic conduit or rigid U-shaped moulding. Such conduit or moulding shall be of material as specified in Rule 22.8.”*

The following poles had 7 feet of riser covered:

- SF24554D
- BA52162A

**4. GO 95, Rule 91.3A(1), Poles with Vertical Runs or Risers,** states in part:

*“All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles...”*

Jointly used pole BA12847A, with vertical runs attached, did not have pole steps attached.

**5. GO 95, Rule 93, Climbing Space,** states:

*“Climbing space shall be provided on all jointly used poles which support conductors and the provisions of Rules 54.7 and 84.7 are directly applicable to such poles. Climbing space on jointly used poles shall be so correlated between conductor levels that its position in relation to the pole is not changed by more than 90 degrees in a vertical distance of less than 8 feet. Climbing space shall be maintained from the ground level.”*

Climbing space was impeded on the following poles:

- SF54255B
- BA01347A
- BA01348A
- SF24554D
- SF03140A

6. **GO 95, Rule 94.4C**, requires a 6-foot clearance between the antenna and supporting elements and supply conductors operating between 7,500 – 20,000 Volts. On pole SF15063C, ESRB staff measured 5.5 feet of clearance between T-Mobile’s pole-top antenna and the primary level conductors.

7. **GO 95, Rule 94.5A, Marking**, states:

*“Antennas shall be marked in accordance with Appendix H, including Exhibit A, to GO 95.”*

Appendix H requires T-Mobile to place warning signs on poles no less than 9 feet above ground. Warning signs on the following poles with antennas were placed less than 9 feet above the ground line:

- BA01347A
- BA02099A
- BA22904B

Appendix H also requires that T-Mobile place a warning sign that identifies the applicable FCC exposure category (General Population/Uncontrolled or Occupational/Controlled) and the recommended minimum approach distance as set forth in 47 CFR. FCC warning signs were not placed on the following poles:

- BA52162A (FCC warning sign was illegible)
- SF23254E
- SF23253E

8. **GO 95, Rule 94.5B, Marking**, states:

*“Joint use poles shall be marked with a sign for each antenna installation as follows:*

- (1) Identification of antenna operator*
- (2) A 24-hour contact number of antenna operator for Emergency or Information*
- (3) Unique identifier of the antenna installation.”*

The following poles were missing a unique identifier/site number:

- SF54255B
- BA12847A